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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,294	04/10/2001	Holger Eggers	MO-6277/WW-5	5941

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EXAMINER

RIBAR, TRAVIS B

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,294

Applicant(s)

EGGERS ET AL.

Examiner

Travis B Ribar

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-8 and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-8 and 10 of copending Application No. 09/807094. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 2 in copending Application No. 09/807094 contains all of the elements of claim 1 of the current application. The multilayer film in claim 2 of copending Application No. 09/807094 is the same as the multilayer film in claim 1 of the current application. Further, since the thickness of any additional films is not claimed in claim 1 of the current application, the thickness of the film layers listed in claim 1 in copending Application No. 09/807094 is included within the scope of this claim. Therefore it would

have been obvious to make a film meeting claim 2 of copending Application No. 09/807094 that would exactly match the film in claim 1 of the current application.

The combination of claims 2 and 3 in copending Application No. 09/807094 contains all of the elements of claim 2 of the current application.

The combination of claims 2 and 4 in copending Application No. 09/807094 contains all of the elements of claim 3 of the current application.

The combination of claims 2 and 5 in copending Application No. 09/807094 contains all of the elements of claim 4 of the current application. Here it is noted that layered silicates are layers of sheet silicates.

Claim 5 includes all of the elements of claim 2 of copending Application No. 09/807094. The difference is that copending Application No. 09/807094 indicates that the thickness of the outer layer is less than half of the total thickness of the other polyamide layers. Even though claim 5 does not specify how thick the additional polyamide layers are, it would have been obvious that one could have made the layers thick enough that the resulting film would meet the specifications of claim 2 in copending Application No. 09/807094. The motivation for doing so could be to improve the mechanical or barrier properties of the resultant polyamide film.

The combination of claims 2 and 6 in copending Application No. 09/807094 contains all of the elements of claim 6 of the current application.

The combination of claims 2 and 7 in copending Application No. 09/807094 contains all of the elements of claim 7 of the current application.

The combination of claims 2 and 8 in copending Application No. 09/807094 contains all of the elements of claim 8 of the current application. Here it is noted that a coupling layer is the same as an adhesion-promoting layer.

The combination of claims 2 and 10 in copending Application No. 09/807094 contains all of the elements of claim 15 of the current application.

The combination of claims 2 and 12 in copending Application No. 09/807094 contains all of the elements of claim 16 of the current application. Here it is noted that the shape-fill-seal machines specified in claim 16 of the current application are well known in the art as being used in the packaging of foodstuffs.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification states that the polymer composition may contain anywhere from 10 ppm of the nanoscale nucleating agent to 2000 ppm of the nanoscale nucleating agent (page 6, lines 19-20). It does not state and the examples do not show that the invention includes compositions containing up to 3000 ppm of the nanoscale nucleating agent (claim 1, line 10). Therefore, the applicant does not convey to one skilled in the art that the compositions containing from 2000 ppm to 3000 ppm of the nanoscale nucleating agent are included in the scope of this invention. This rejection may be overcome by amending the claim to read that the nucleating agent is present up to 2000 ppm.

Claims 2-16 are rejected under this heading due to their dependence from claim

1.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear from the language of the claim what properties of the particles are claimed. For the purposes of this examination, this claim will be presumed to mean that the particles have aspect ratios of at least 10.

7. Claim 9 recites the limitation "... (II), (III), (IV), and/or (V)..." in line 2. There is insufficient antecedent basis for this limitation in the claim.

8. The following phrases have been interpreted by the examiner to indicate either open or closed language, as indicated:

Claim 1, line 10: "...layer (I) contains..." is interpreted as open language.

Claim 2, line 1: "...layer (I) contains..." is interpreted as open language.

Claim 3, line 2: "...layer (I) have..." is interpreted as open language.

Claim 5, line 1: "...said film contains..." is interpreted as open language.

Claim 6, line 1: "...said film contains..." is interpreted as open language.

Claim 7, line 1: "...said film has..." is interpreted as open language.

Claim 8, line 1: "...said film contains..." is interpreted as open language.

Claim 9, line 1: "...said film contains..." is interpreted as open language.

9. Regarding claim 2, the term, "...or mixtures of those polymers or copolymers..." forms an improper Markush group. As they are written, these groups contain open language. The applicant is reminded that proper Markush groups contain closed language. Amendment of these claims to read, "...and mixtures of those polymers and copolymers..." is suggested to overcome this rejection.

10. Claim 16 provides for the use of a film, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 16 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

12. Claims 1-8 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 09/807094.

The elements of claims 1-8 and 15-16 and their relation to copending application no. 09/807094 are discussed in the double patenting section of this office action.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-4, 10, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khanna et al. in view of Mizutani et al.

Khanna et al. discloses a polyamide polymer (column 7, lines 14-33) that is used as a single or multi-layer film (column 11, lines 42-59). The polyamide polymer includes a small amount (column 9, lines 9-16) of silica nucleating agent (column 8, line 67). It is envisioned that the polyamide layer is pure polyamide 6, meeting that part of claims 1 and 10. Claims 10 and 14 are met because the single stand-alone film of claim 1 containing only polyamide 6 envisioned by the reference would also meet the requirements of claims 10 and 14.

The amount of nucleating agent falls in the range specified by the applicant in claim 1 and the silica particles have diameters less than 100 nm, fulfilling that aspect of claim 1 as well. It is well known that a nucleating agent is used so that polymer crystals form from the surface of the nucleating agent upon cooling of the polymer.

Khanna et al. also envisions the use of other polymers besides polyamide 6 in the polymer film (column 7, lines 14-33) in the form of copolymers or blends. The presence of less than 10% by weight of a second polyamide in the film (in addition to the polyamide 6 that is present) is therefore also envisioned in the reference, meeting this aspect of claim 2.

The films in Khanna et al. are not expressly stated to be of a specific thickness (claim 12) or flat (claim 13), but the production of such a film would be obvious from the teachings of this reference and would be useful for the applications that Khanna et al. teaches (column 11, lines 44-59).

These films are produced by extrusion methods (column 11, lines 58-59) or extrusion blow molding methods (column 11, lines 20-22) in which the extruded film is simultaneously stretched in the longitudinal and transverse directions. The films of the reference are also used in food packaging applications (column 11, lines 55-56). The reference therefore meets the requirements of claims 15 and 16, respectively.

Khanna et al. does not, however, disclose the cooling rate that the applicant specifies in claim 1 or that the nucleating agents have high aspect ratios or are layered silicates (claims 3 and 4). These aspects of the invention are found in Mizutani et al.

Mizutani et al. discloses that layered silica, montmorillonite, which has the aspect ratio that the applicant claims in claim 3, is a suitable nucleating agent for creating crystals in polymers (column 12, line 45). It is well known in the art that in order to nucleate a polymer one must cool it from above its melting temperature to below its glass transition temperature. Mizutani et al. discloses that the cooling rate that the

applicant cites in claim 1 is known in the art to form crystals in a polymer (column 17, lines 22-23).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use montmorillonite as the nucleating agent and 10°C per minute as the cooling rate in the invention shown in Khanna et al. It further would have been obvious to produce a thin flat film using the composition shown in Khanna et al. The motivation for doing so would be to create a suitably crystallized polymer that would be useful in food packaging applications. Therefore it would have been obvious to combine Mizutani et al. with Khanna et al. to obtain the invention as specified in claims 1-4, 10, and 12-16.

15. Claims 1-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh in view of the combined teachings of Khanna et al. and Mizutani et al.

Ramesh discloses a multilayer film structure useful for the packaging of foodstuffs (column 19, lines 22-31, meeting claim 16) that includes multiple layers of polyamide and ethylene-vinyl alcohol (column 2, lines 38-53). In the multilayer film, the outer layer is polyamide (column 3, lines 23-25 and column 15, line 47) and there may be a tie layer between the layers in order to improve adhesion between them (column 3, lines 33-38). In this respect, Ramesh meets these parts of claims 6, 8, and 14. The second polyamide layer in Ramesh does not include nano-scale nucleating agents (meeting claim 5) and the film may include a heat-sealing layer on one outer surface of the film (column 19, line 3 and column 14, lines 54-55), meeting claim 7.

Where the multilayer film in Ramesh does not include a tie layer, the film includes layers only of polyamide and ethylene-vinyl alcohol and meets this part of claim 11. In embodiments where it includes a tie layer and other polymer layers (such as example 3 in the reference), it meets the restrictions of claim 9.

Ramesh also teaches in example 3 a film with the thickness (column 22, line 2) specified by the applicant in claim 12 and the stretching characteristics (column 21, line 57 to column 22, line 1) that the applicant claims in claim 15. If the application in which the resulting multilayer film was going to be used in called for a flat film, it would be obvious from the reference how to create a flat film in the same manner (claim 13).

Ramesh does not, however, teach the inclusion of nucleating agents in the polyamide layer. Khanna et al. and Mizutani et al. are applied as shown above and teach the use of a small amount of small nucleating agent and a specific cooling rate in order to create a film with improved crystalline, and therefore mechanical, properties. It is also noted that the polyamides that Ramesh uses include blends (column 10, lines 24-39) and include many of the same polyamides listed in Khanna et al. Therefore the substitution of the polyamide film taught by the combination of Khanna et al. and Mizutani et al. for the outer polyamide layer in the multilayer film in Ramesh would be obvious to one skilled in the art.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the polyamide film taught by the combination of Khanna et al. and Mizutani et al. as the outer layer in the multilayer film shown in Ramesh. The motivation for doing so would be to provide a multilayer film with improved mechanical properties.

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Therefore it would have been obvious to combine Khanna et al. and Mizutani et al. with Ramesh to obtain the invention as specified in claims 1-9 and 11-16.

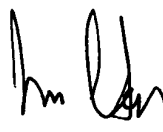
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar
Examiner
Art Unit 1711

TBR
June 3, 2002



James J. Seidleck
Supervisory Patent Examiner
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